LISTING OF THE CLAIMS

2 CLAIMS

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- 3 We claim:
- 4 1. (Currently amended) An apparatus comprising:
- 5 a buffer for storing indications of interrupts events generated by a plurality of ports of a peripheral
- device, events include at least one of any of the following: an interrupt: an internal flag: a status 6
- indication of completion of the read operation; an indication that a new header is waiting; an 7
- indication that a packet header is ready; an indication triggered at an end of header processing, a 8
- 9 descriptor, or a set of descriptors; a completion indication as a received packet which includes an
- acknowledgment; an indication of reception of a frame for transmission; an indication that a 10
- 11 EventMask bit is cleared, an indication that the EventMask bit is cleared; an indication that a
- predetermined minimum number of event completed, said apparatus for transferring interrupts 12
- from the peripheral device to a host computer system, and 13
- 14 a controller having a preset condition for an application, said preset condition comprising one of:
- 15 a determination that the buffer is full; a determination that at least a predetermined plurality of
- 16 indications is stored in the buffer; a predetermined period has elapsed; and a determination that at
- least one indication is stored in the buffer and that a predetermined period has elapsed, said 17
- 18 controller for, in response to a preset condition being met based on said indications, generating a
- 19 control data block comprising a payload portion having a plurality of fields each corresponding to
- 20 a port from said plurality of ports and a header portion having an identifier for identifying the
- 21 control data block, moving the contents of the buffer to the payload portion of the control data
- 22
- block, and sending the control data block to the host computer system via one port of the plurality
- 23 of ports.

- 1 2. (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a
- 2 determination that the buffer is full
- 3 (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a
- 4 determination that at least a predetermined plurality of indications is stored in the buffer and that a
- 5 predetermined period has elapsed.
- 6 4. (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a
- 7 determination that at least one indication is stored in the buffer and that a predetermined period
- 8 has elapsed.
- 9 5. (Previously presented) An apparatus as claimed in claim 1, wherein the header portion
- 10 comprises a count indicative of the number of indications included in the payload portion.
- 11 6. (original) An apparatus as claimed in claim 1, wherein the header portion comprises a time of
- 12 day stamp.
- 13 7. (original) An apparatus as claimed in claim 1, wherein the buffer comprises a first in first out
- 14 memory buffer.
- 15 8. (previously presented) A communications device comprising the apparatus as claimed in claim
- 16 1
- 17 9. (previously presented) A data communications network interface comprising the
- 18 communications device as claimed in claim 8.
- 19 10. (previously presented) An apparatus as claimed in claim 1, further comprising:
- 20 a host processing system having a memory, a data communications interface for communicating
- 21 data between the host computer system and a data communications network, forming a data

- 1 processing system for controlling flow of interrupts from the data communication interface to the
- 2 memory of the host processing system.
- 3 11. (currently amended) A method comprising transferring interrupts from a peripheral device to a
- 4 host computer system, the peripheral device having a plurality of ports, the steps of transferring
- 5 interrupts comprising:
- 6 storing interrupts generated by said ports of the peripheral device in a buffer;
- 7 determining if a preset condition is met, said preset condition comprising any of: a determination
- 8 that the buffer is full; a determination that at least a predetermined plurality of indications is stored
- 9 in the buffer; a predetermined period has elapsed; and a determination that at least one indication
- 10 is stored in the buffer and that a predetermined period has elapsed, said controller for, in response
- 11 to a preset condition being met based on said indications; and
- 12 in response to the preset condition being met, -generating a control data block comprising a
- 13 payload portion having a plurality of fields each corresponding to a different port from said
- 14 plurality of ports and a header portion having an identifier for identifying the control data block;
- 15 moving the contents of the buffer to the corresponding fields of the payload portion; and
- sending the control data block to the host computer system via one of the ports.
- 17 12. (original) A method as claimed in claim 11, wherein the step of determining if the preset
- 18 condition is met comprises determining if the buffer is full.
- 19 13. (currently amended) A method as claimed in claim 11, wherein the step of determining if the
- 20 preset condition is met comprises determining if at least a predetermined plurality of indications is
- 21 stored in the buffer and if a predetermined period has elapsed, indications include at least one of
- 22 any of the following: an interrupt: an internal flag: a status indication of completion of the read

- 1 operation; an indication that a new header is waiting; an indication that a packet header is ready;
- 2 an indication triggered at an end of header processing, a descriptor, or a set of descriptors; a
- 3 completion indication as a received packet which includes an acknowledgment; an indication of
- 4 reception of a frame for transmission; an indication that a EventMask bit is cleared, an indication
- 5 that the EventMask bit is cleared; an indication that a predetermined minimum number of event
- 6 completed,...
- 7 14. (Currently amended) A method as claimed in claim 12 elaim 11, wherein the step of
- 8 determining if the preset condition is met comprises determining if at least one indication
- 9 is stored in the buffer and if a predetermined period has elapsed.
- 10 15. (Currently amended) A method as claimed in claim 12 elaim 11, wherein the header portion
- 11 comprises a count indicative of the number of indications included in the payload portion.
- 12 16. (original) A method as claimed in claim 11, wherein the buffer comprises a first in first out
- 13 memory buffer.
- 14 17. (previously presented) A computer program product comprising a computer usable medium
- 15 having computer readable program code means embodied therein for causing transfer of
- 16 interrupts, the computer readable program code means in said computer program product
- 17 comprising computer readable program code means for causing a computer to effect all functions
- 18 of the apparatus of claim 1.
- 19 18. (previously presented) A computer program product comprising a computer usable medium
- 20 having computer readable program code means embodied therein for causing data processing, the
- 21 computer readable program code means in said computer program product comprising computer
- 22 readable program code means for causing a computer to effect all functions of the apparatus of
- 23 claim 10
- 24 19. (previously presented) An article of manufacture comprising a computer usable medium
- 25 having computer readable program code means embodied therein for causing transfer of

- 1 interrupts, the computer readable program code means in said article of manufacture comprising
- 2 computer readable program code means for causing a computer to effect all steps of the method
- 3 of claim 11
- 4 20. (previously presented) A program storage device readable by a machine, tangibly embodying
- 5 a program of instructions executable by the machine to perform method steps for transferring
- 6 interrupts, said method steps comprising all steps of the method of claim 11.
- 7 21. (previously presented) An apparatus as claimed in claim 1, wherein:
- 8 the preset condition comprises at least one of:
- 9 a determination that the buffer is full,
- 10 a determination that at least a predetermined plurality of indications is stored in the buffer
 11 and that a predetermined period has elapsed, and
- determination that at least one indication is stored in the buffer and that a predetermined period has elapsed:
- 14 the header portion comprises a count indicative of the number of indications included in the
- 15 payload portion;
- 16 the header portion comprises a time of day stamp; and
- 17 the buffer comprises a first in first out memory buffer.
- 18 22. (previously presented) An apparatus as claimed in claim 21, further comprising:
- 19 a host processing system having a memory, a data communications interface for communicating
- 20 data between the host computer system and a data communications network, forming a data
- 21 processing system for controlling flow of interrupts from the data communication interface to the
- 22 memory of the host processing system.